No. 688,480. Patented Dec. 10, 1901.

D. D. NUGENT.

ELECTRIC LAMP AND SOCKET THEREFOR.

(Application filed Jan. 4, 1901.)

(No Model.)

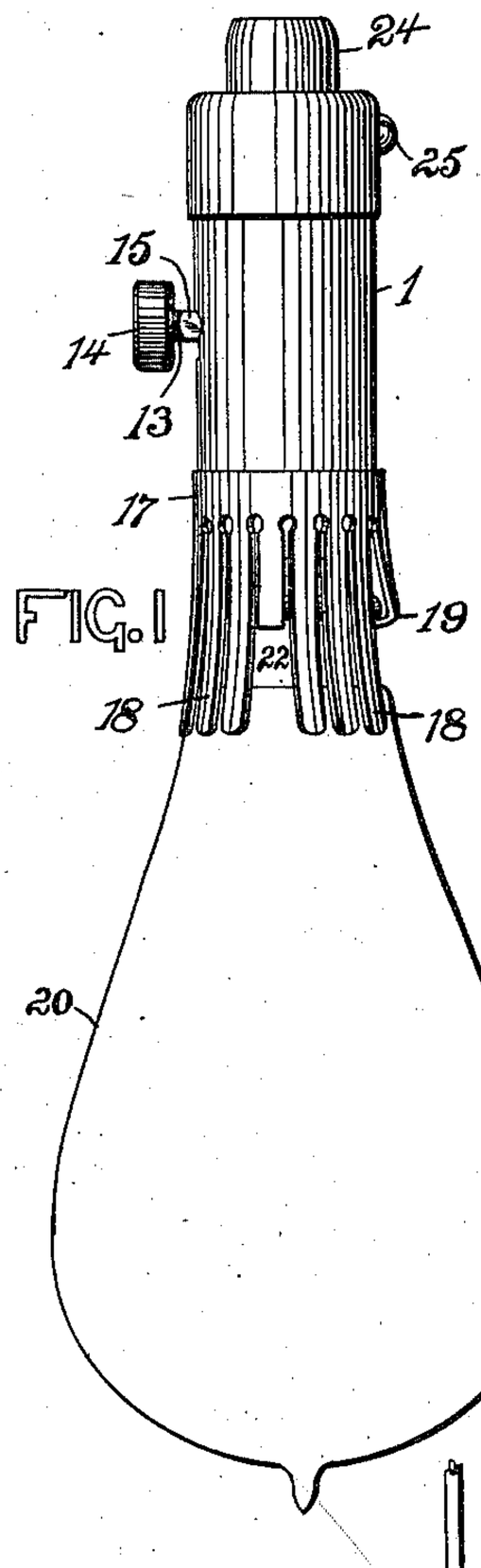

FIG. 1

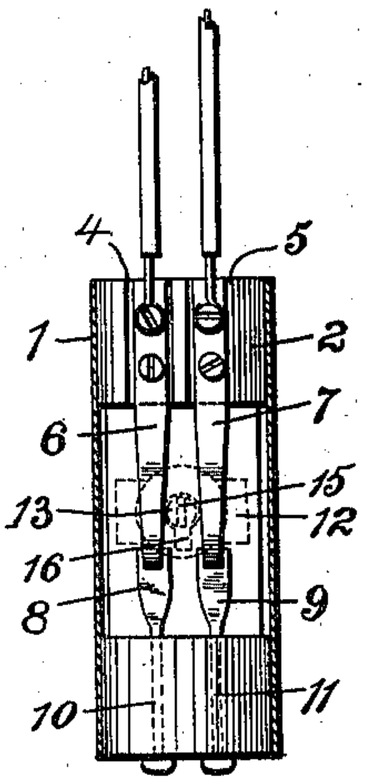

FIG. 3

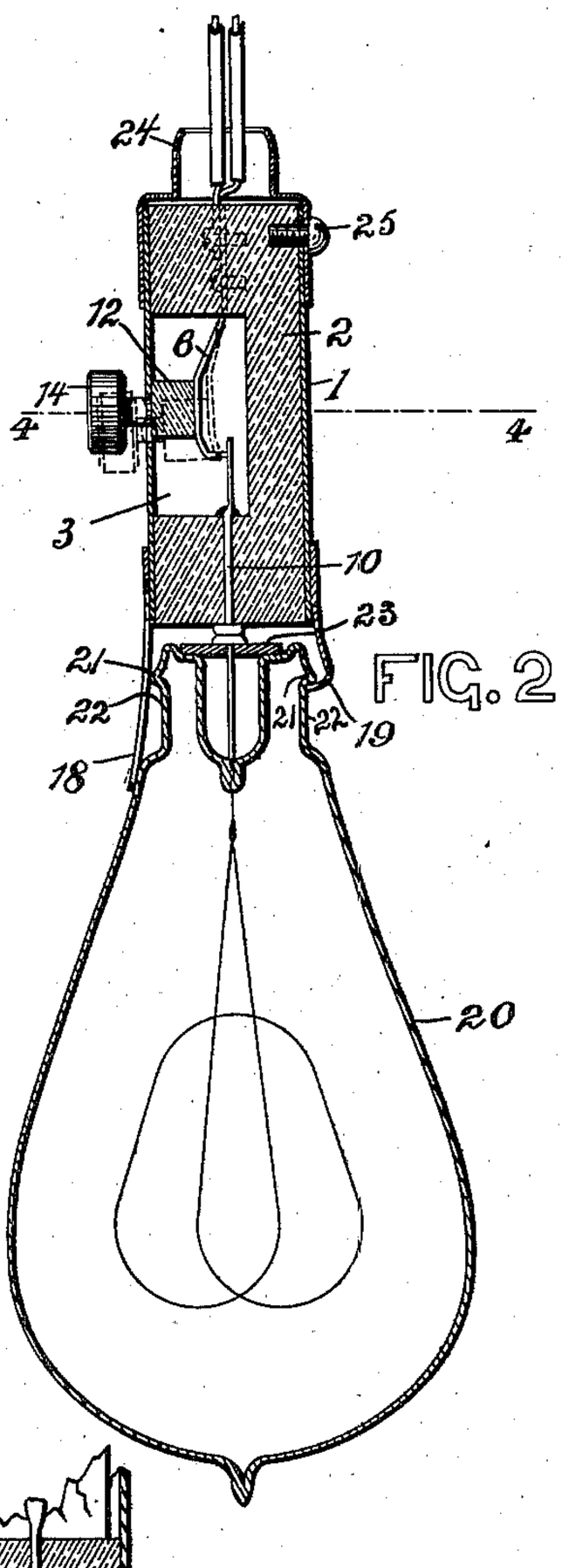

FIG. 2

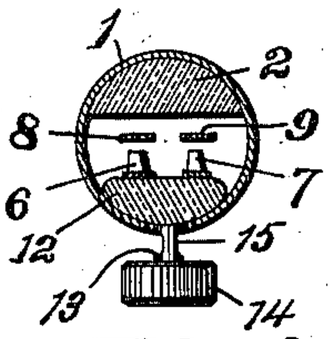

FIG. 4

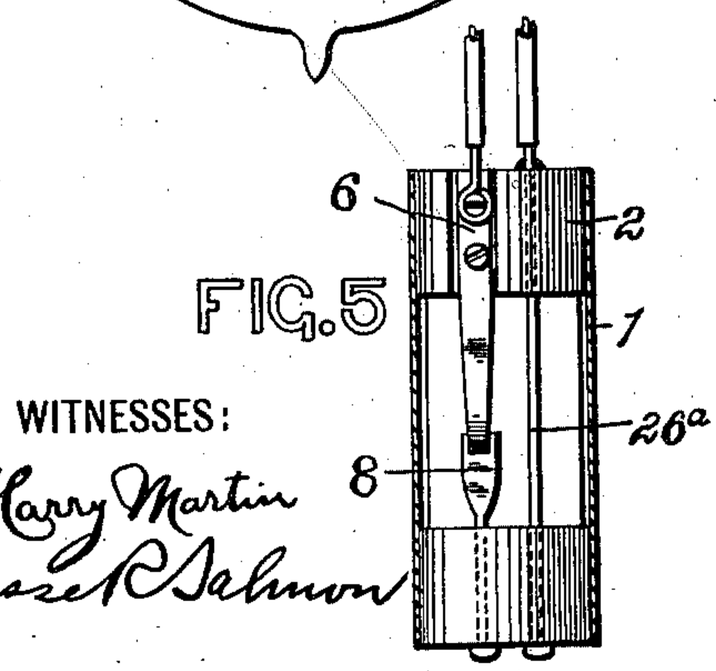

FIG. 5

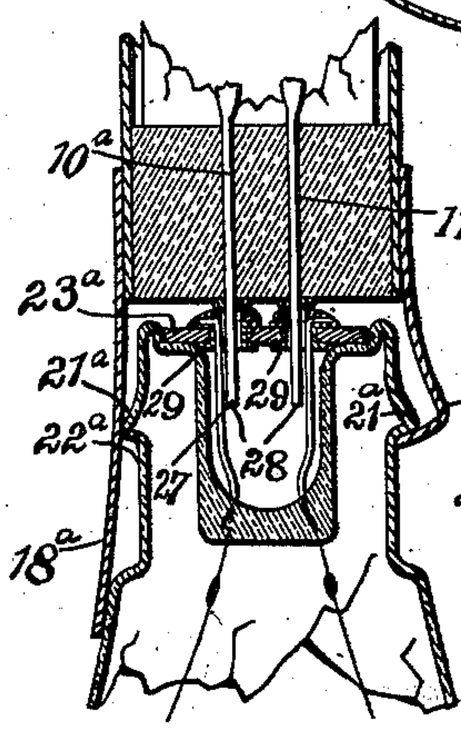

FIG. 6

WITNESSES:

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ELECTRIC LAMP AND SOCKET THEREFOR.

SPECIFICATION forming part of Letters Patent No. 688,480, dated December 10, 1901.

Application filed January 4, 1901. Serial No. 42,047. (No model.)

To all whom it may concern:

Be it known that I, DANIEL D. NUGENT, a citizen of the United States, residing at Harrison, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Electric Lamps and Sockets Therefor; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to a new and novel construction of incandescent electric lamp and is designed to provide a lamp cheap and simple in construction and which is not cumbersome.

The invention is also designed to provide a socket therefor, which, in combination with the bulb, makes a complete and neat lamp.

The improved device is designed to simplify the construction of the socket and to provide a socket that will steadily and firmly hold the bulb.

My improved socket is also designed to furnish a socket-switch easily manipulated and which will facilitate the lighting and extinguishing of pendent or movable lamps.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation, and Fig. 2 a sectional view, of my device. Fig. 3 is a view of a portion of the socket, and Fig. 4 is a section on line 4 in Fig. 2. Fig. 5 is a modified form of construction of the socket-switch, and Fig. 6 is a view of a modified method of connecting the bulb and the socket-contacts.

In said drawings similar reference-numbers relate to like parts in each of the several views.

The lamp-socket is made up of a metallic cylinder or casing 1, open at the ends, into which is placed a cylindrical block 2, made of porcelain or other non-conducting material, which is provided with a cut-away portion, forming with the casing 1 a chamber 3, in which is arranged the switch mechanism. Said block 2 is also provided with a pair of slots 4 and 5, into which are secured, preferably by screws, as shown, a pair of spring-plates 6 and 7, which can be connected by the screws to the feed-wires. Said spring-plates 6 and 7 project down into the chamber 3 and are set opposite to two flat plates 8 and 9, which are formed integral with or may be fastened to the wires 10 and 11, extending through the lower end of the block 2 to form the contacts for the lamp. The said spring-plates 6 and 7 serve by their own action to keep the circuit open and also to force a small block 12 against the casing 1, as shown in Figs. 2 and 4. Secured to said block 12 is a shank 13, which is provided with a knob or button 14 and is flattened at its central portion 15. The casing 1 is provided with a circular opening into which is adapted to fit the shank 13, and a slotted portion 16, Fig. 3, receives the flattened portion of the shank when the button 14 is pressed downwardly and inwardly. Thus when the button is manipulated the shoulders on the end of the flattened portion 15 of the shank 13 press against the inside of the casing and hold the spring-plates 6 and 7 in contact with the plates 8 and 9, and the circuit is closed. By a pressure upward the circular portion of the shank comes in line with the circular opening in the casing, as in Fig. 3, and the contact-plates will snap apart, as will be evident.

On the lower end of the casing 1 is arranged a bell-shaped metallic bulb-receiving socket 17, which is slitted to form spring-arms 18, some of which are cut off and bent inward to form the retaining-hooks 19, which serve to hold the bulb after its insertion.

The bulb 20 is provided with the straight neck portion 22 and the circular bead 21, forming a circular gripping portion for the reception of the hooks 19, and it is not necessary to provide the bulb with a metallic sheathing of any sort. At the end of the bulb is placed the disk or plate 23, through which project the wires of the lamp and on the upper face of which are placed the contacts.

On the upper end of the casing 1 is placed a hood or cap 24, and the elements of the socket can be held together by means of the screw 25, as will be understood.

Fig. 5 shows a modified form of contact mechanism, in which one of the spring-plates is omitted and one of the wires, as 26, passes directly through the block 2^a, as will be evident.

I have shown in Fig. 6 a view at right angles to Fig. 2, showing a modified means of securing the wires of the lamp to the disk 23^a and a novel contact means. In this construc-

tion the wires 10^a and 11^a project from the bottom of the block 2^a, forming prongs 27 and 28, a slight amount of solder at their bases serving to hold them and also to provide a more extensive contact. The disk or plate 23^a is provided with two eyelets 29, which when the lamp is placed in the socket embrace the prongs 27 and 28 and to which are soldered or otherwise secured the wires of the lamp, as will be evident.

The advantages of my construction embody simplicity of construction, cheapness of manufacture, and ease of manipulation.

By my new switch and latch mechanism a lamp is simply taken in hand and the button pressed, whereas in the sockets having the turning finger-pieces a lamp-pendant is not lighted or extinguished with one hand.

The bulb-receiving end of my present novel construction is both neat and positive. The hooks serve to hold and force the contact, while the projecting spring-arms embrace the neck of the lamp beyond the hooks and by their spring action hold the lamp firm, as it cannot rattle either way, the hooks and arms preventing.

The bulb for the present construction of socket is made with a bead of glass integral with the bulb and requires no sheathing or cumbersome base, as the retaining-bead is not subject to any twisting strain, as the stout spring-arms of the socket embracing the bulb beyond the hooks hold the bulb true, central, and firm. A single disk of non-conducting material to hold the contact-points provides a cheap construction and one that can be quickly and easily made.

Having thus described my invention, what I claim is—

1. A lamp consisting of a bulb with an integral retaining-bead near its base, a flat non-conducting disk on its base, provided with contacts, in combination with a socket consisting of a switch mechanism, a catch on said switch to lock it in its closed position, retaining-hooks on the lower end of the socket to grasp the bead on the bulb, and spring-arms extending beyond said hooks and embracing the bulb, substantially as set forth.

2. A socket for incandescent lamps consisting of a casing, a block of non-conducting material in said casing cut away to form a chamber, spring contact-plates in said chamber communicating with the feed-wires, rigid contact-plates connected with the contacts for the lamps, a button bearing on said spring-arms, and a latch mechanism for locking said button and spring contact-plates in their closed positions, substantially as set forth.

3. A socket for incandescent lamps consisting of a casing, a block of non-conducting material in said casing cut away to form a chamber, spring contact-plates in said chamber, communicating with the feed-wires, rigid contact-plates connected with the contacts for the lamp, an actuating means for said spring-plates consisting of a block, a shank projecting from said block through the casing, a button on said shank, a reduced central portion on said shank, a circular opening in said casing to receive the shank in its open position and a slot contiguous thereto to receive the reduced portion of the shank in its closed position, substantially as set forth.

4. A socket for incandescent lamps consisting of a casing, a block of non-conducting material in said casing cut away to form a chamber, spring contact-plates in said chamber, communicating with the feed-wires, rigid contact-plates connected with the contacts for the lamp, an actuating means for said spring-plates consisting of a block, a shank projecting from said block through the casing, a button on said shank, a reduced central portion on said shank, a circular opening to receive the shank in its open position and a slot contiguous thereto to receive the reduced portion of the shank in its closed position, spring-retaining hooks on the lower end of said socket to grasp a lamp-bulb, and spring-arms extending beyond said hooks, to embrace the bulb, substantially as set forth.

5. A lamp consisting of a bulb, a retaining-bead near its base, a disk or washer of non-conducting material on the base of said bulb, a pair of eyelets in said washer connected with the filament, in combination with a socket, consisting of a switch mechanism, contact-prongs extending from said socket and adapted to project through the eyelets in the lamp, substantially as set forth.

6. A lamp consisting of a bulb, a retaining-bead near its base, a disk or washer of non-conducting material on the base of said bulb, a pair of eyelets in said washer connected with the filament, in combination with a socket, consisting of a switch mechanism, contact-prongs extending from said socket and adapted to project through the eyelets in the lamp, spring-arms on said socket embracing the lamp-bulb, some of said arms being bent to form retaining-hooks, substantially as set forth.

7. A socket for incandescent electric lamps, consisting of a chamber containing a switch mechanism, provided with a series of spring-plates integral with spring-retaining hooks of less length, which serve to hold the bulb, substantially as set forth.

8. A lamp, consisting of a bulb, a retaining-bead near its base, in combination, with a socket, provided with a circular series of spring-plates to embrace the bulb, integral with spring-retaining hooks of less length, which serve to hold the bulb, substantially as set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 31st day of December, 1900.

DANIEL D. NUGENT.

Witnesses:
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HARRY MARTIN.